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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/664,986	09/17/2003	Katsuhiko Ito	14470.0007US01	4641
52835	7590	06/13/2006	EXAMINER	
HAMRE, SCHUMANN, MUELLER & LARSON, P.C. P.O. BOX 2902-0902 MINNEAPOLIS, MN 55402			WALTERS, JOHN DANIEL	
			ART UNIT	PAPER NUMBER
			3618	

DATE MAILED: 06/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/664,986

Applicant(s)

ITO ET AL.

Examiner

John D. Walters

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 20040205.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

### **DETAILED ACTION**

Claims 1 – 12 have been examined.

#### ***Specification***

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

#### ***Claim Objections***

Claims 4 and 10 are objected to because of the following informalities:

- Claims 4 and 10 are exact copies of each other and both dependant on claim 1, thus they are redundant and one should be removed.

Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

Claims 8 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 8 recites the limitations "the transmission means" and "the reciprocating means". There is insufficient antecedent basis for this limitation in the claim.

Claim 9 recites the limitation "the transmission means". There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 103***

Claims 1 – 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al. (6,470,770). Ito discloses a power system for vehicles comprising:

- an internal engine (Fig. 1, item 4);
- a cylinder block (Fig. 1, item 13);
- a cylinder center axis (Fig. 1, item C0);
- a crankshaft (Fig. 1, item 5);
- said crankshaft being disposed in a substantially front-rear direction (Figs. 1 and 2);
- a static oil hydraulic non-stage transmission (Fig. 1, item 40);
- a swash plate oil hydraulic pump (Fig. 3, item 42);
- a swash plate oil hydraulic motor (Fig. 3, item 44);
- a speed change drive shaft (Fig. 1, item 64);
- a drive member (Fig. 1, item 43);
- said speed change drive shaft being in parallel to an axis of said transmission (Fig. 1);
- a plane connecting an axis of said speed change drive shaft and said axis of said transmission (Fig. 1, item L);

- said plane not intersecting an axis of the crankshaft (Fig. 1);
- said plane intersecting said cylinder center axis (Fig. 1);
- a speed change sensor disposed on a lateral side of said transmission at a substantially right angle to said axis of said transmission (Fig. 1, item 121);
- a crankcase incorporating said static oil hydraulic type non-stage transmission and said speed change drive shaft (Fig. 2, item 10);
- a breather chamber (Fig. 3, in item 10b).

Ito does not position said transmission and said speed change drive shaft in a manner which creates a plane which makes an acute angle with said cylinder center axis. Ito has positioned said transmission and said speed change drive shaft in a horizontal orientation which increases the side-to-side dimension of said engine/transmission assembly. This makes an angle between said plane and said axis which is approximately 90°. The rotation of these components into a more vertical orientation would necessarily decrease the side-to-side dimension. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to rotate a horizontal component into a vertical orientation in order to change the dimensions/configuration of the final assembly.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

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- Hayashi et al. (5,584,214) discloses a transmission having a static, hydraulic continuously-variable-speed transmission mechanism;
- Ito et al. (6,357,413) discloses an internal combustion engine power unit;
- Hori et al. (6,357,545) discloses a power unit for a vehicle;
- Korenjak et al. (6,896,087) discloses a component arrangement for an all terrain vehicle.

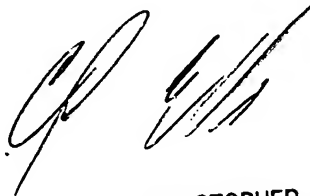
Any inquiry concerning this communication or earlier communications from the examiner should be directed to John D. Walters whose telephone number is (571) 272-8269. The examiner can normally be reached on Monday - Friday, 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Ellis can be reached on (571) 272-6914. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

John D. Walters  
Examiner  
Art Unit 3618

JDW

A handwritten signature consisting of the letters 'JDW' enclosed within a circle.A handwritten signature consisting of the letters 'CP' followed by a stylized 'E'.

CHRISTOPHER P. ELLIS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600